



**Testimony
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By

**Ann R. Mesnikoff
Washington Representative
Sierra Club Global Warming and Energy Program
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INTRODUCTION

Thank you Mr. Chairman and members of the Committee. I am Ann Mesnikoff, Washington Representative of Sierra Club's Global Warming and Energy Program. I appreciate the opportunity to testify today on behalf Sierra Club's more than half million members nationwide on solutions to global warming. My testimony will focus on the key solution of raising Corporate Average Fuel Economy (CAFE) standards for cars and light trucks.

Global warming is the most significant environmental threat we face. Yet, the United States has entered the 21st century relying on dirty, polluting 19th century fossil fuel technology. In contrast, our economic competitors, Japan and Europe, use only half the energy we do to achieve roughly the same standard of living.

The key to curbing global warming is improving energy efficiency. Cars and light trucks alone emit 20% of US carbon dioxide pollution and guzzle 40% of the oil used in this country. Raising CAFE standards is the biggest single step the US can take to stem global warming. Our power plants, homes and buildings could also be made much more efficient by simply installing the best current technology. Energy efficiency is the cleanest, safest, most cost-effective way we can begin to deal with global warming.

GLOBAL WARMING

The human race is engaged in the largest and most dangerous experiment in history --an experiment to see what will happen to our health and the health of the planet when we make drastic changes to our climate.

This is not part of some deliberate scientific inquiry. It is an uncontrolled experiment on the Earth, and we are gambling our children's future on its outcome.

The rapid buildup of carbon dioxide and other "greenhouse gases" in our atmosphere is the source of the problem. Over the last one hundred years we have increased the concentrations of key global warming pollutants in our atmosphere. For example, carbon dioxide (CO₂), the primary global warming gas, has increased by 30%. By burning ever increasing quantities of coal, oil, and gas we are literally changing the atmosphere.

The results of global warming pollution are already significant. Many regions of the world have warmed by as much as 5 degrees Fahrenheit. Physicians at Harvard and Johns Hopkins Medical Schools and other medical institutions have issued grim assessments that global warming may already be causing the spread of infectious diseases and increasing heat wave deaths. Increased flooding, storms, and agricultural losses could devastate our economy. Sea level rise threatens to inundate one third of Florida and Louisiana and entire island nations. If we do not curb global warming pollution, our children and grandchildren will live in a world with a climate far less hospitable than today.

THE EVIDENCE OF GLOBAL WARMING MOUNTS

For years climate experts have used powerful computers to predict the likely results of global warming. Scientists are now becoming increasingly alarmed as more and more of these predictions come true.

A series of disturbing climate-related events offer a taste of what global warming may have in store for us. The Sierra Club joined with seven other environmental organizations to produce a map of the world showing evidence and harbingers of global warming. The image is dramatic and demands action (Attachment A).

While we cannot yet prove that global warming has caused any one event, the list below is all consistent with the projections of climate models.

- ‘ The 1990s were the hottest decade on record.
- ‘ The hottest 11 years on record have all occurred in the past 13 years.
- , Ranges of infectious disease are spreading, and cases of infection are increasing around the world. Dengue fever infected victims in Texas in 1995, and in recent years malaria infections have occurred as far north as New York, New Jersey, and Michigan.
- , Major shifts in temperature are already being felt. Some parts of the world have warmed by 5 degrees Fahrenheit or more in the last 100 years. The average temperature of the entire planet has risen 1 degree Fahrenheit.
- , In 1995, after a period of unusual warming -- 4.5 degrees F. above normal -- a 48 by 22 mile chunk of the Larsen ice shelf in Antarctica collapsed. In subsequent years we have seen additional chunks of the ice shelf breaking off.

- ‘ Sea ice is thinning dramatically in the Arctic.
- , Scientists have documented shifting populations and altered migratory behavior as animals, trees and plants attempt to adapt to a changing climate. Many species that cannot adapt are in decline.
- , Sea levels have risen an average of 4-10 inches over the last century, destroying beaches and wetlands around the world, and flooding coastal areas.
- , We are experiencing more common and severe winter floods, storms and summer droughts. More precipitation is falling in extreme weather events, and less in normal, gentle rains.
- , Glaciers are melting on 5 continents and snow cover is disappearing, adding to sea level rise. Species that rely on cold waters and polar climates are shifting their ranges in an effort to escape the warming climate.

More than 2500 of the world's leading climate scientists, participating in the United Nations-sponsored Intergovernmental Panel on Climate Change (IPCC), examined this and other evidence. They have concluded, "The balance of evidence suggests a discernible human influence on global climate."

The IPCC scientists project that during our children's and grandchildren's lifetimes global warming will raise the world's average temperature by 2 to 6 degrees Fahrenheit. By comparison, the Earth is only 5 to 9 degrees Fahrenheit warmer today than it was 10,000 years ago during the last ice age.

Throughout history, major shifts in temperature have occurred at a rate of a few degrees over thousands of years. They were accompanied by radical changes, including the extinction of many species. Manmade global warming is occurring much faster; faster in fact than at any other time in human history.

Unless we slow and ultimately reverse the buildup of greenhouse gases, we will have only decades, not millennia, to try to adapt to major changes in weather patterns, sea levels, and serious threats to human health. Plants and animals that cannot adapt to the new conditions will become extinct.

Like the tobacco industry, many of the corporations that produce carbon dioxide pollution are seeking to deny the truth. Rather than face the fact that our increasing dependence on coal, oil, and gas is altering our climate, many in industry have spent millions of dollars in an effort to discredit the IPCC, deny the reality of global warming and prevent action to curb it.

THE CULPRITS: FOSSIL FUELS

Global warming is a pollution problem. Gas-guzzling cars and light trucks such as mini-vans and sport utility vehicles, are major sources of this pollution -- about 20% of US CO₂ pollution.

Global warming pollution also comes from the burning of coal, oil, and to a lesser extent, natural gas, in our power plants. Coal is especially "dirty," producing nearly twice as much CO₂ per unit of heat produced as natural gas, and a third more than oil.

Deforestation also contributes to global warming. Trees "breathe in" CO₂, and can work to remove part of the pollution we release from the air. When trees are cut down or burned, however, they release carbon dioxide back into the air. The burning of massive areas of forest for farming in the Amazon, Asia and other areas of the world releases enormous large of carbon dioxide into the atmosphere.

SOLUTIONS: WE CAN CURB GLOBAL WARMING

The good news is we can curb and eventually stop global warming, but we must begin to act now. We can do this while strengthening the US economy, especially in the face of very high oil prices, and creating jobs.

The key to curbing global warming is improving energy efficiency. Our cars and light trucks, homes, and power plants could be made much more efficient by simply installing the best current technology. Energy efficiency is the cleanest, safest, most cost-effective way we can begin to deal with global warming.

THE BIGGEST SINGLE STEP: RAISING CAFE STANDARDS

America's cars and light trucks spew out more CO₂ than the total emissions of all sources in all but three other countries (China, Russia and Japan).

While there is no technology to scrub CO₂ from our cars' exhausts, we can make them pollute less by making them more fuel-efficient. By using today's technology, car makers could safely increase the fuel economy of cars and light trucks without significantly changing their size or performance. The biggest single step we can take to curb global warming is to make our cars and sport utilities go further on a gallon of gas by raising Corporate Average Fuel Economy (CAFE) standards to 45 mpg for cars and 34 mpg for light trucks.

Background:

In 1975, Congress passed the most successful energy savings measure it has ever adopted -- the provision setting miles per gallon standards for cars and light trucks. Responding to the oil crisis, Congress determined that making automobiles go further on a gallon of gasoline was essential to saving oil and reducing US dependence on foreign oil. The corporate average fuel economy law passed with bipartisan support, and was signed into law by President Gerald Ford.

Congress established the initial standards, and delegated responsibility for setting new standards to the Administration, specifically the Department of Transportation. Congress provided the Administration

with four factors to consider in setting new standards: technical feasibility, economic practicability, the effect of other federal motor vehicle standards on fuel economy, and the need of the United States to conserve energy.

Benefits of Existing Fuel Economy Standards:

The existing standards save more than 3 million of barrels of oil per day and reduce U.S. dependence on imported oil. Without these savings, the U.S. would be importing at least 1.5 million barrels more every day than today's current levels. Even with the oil savings from CAFE, cars and light trucks consume 40% of the oil used in the US every day -- almost as much as we import.

A gallon of gas is essentially pure carbon and weighs about 7 lbs. When burned, the weight of the carbon is nearly tripled by the addition of the two oxygen atoms, forming CO₂. Thus, every gallon of gas burned directly emits 19 lbs of carbon dioxide from the tailpipe. Including upstream emissions from refining, transport, and refueling, each gallon of gasoline burned emits a total of 28 pounds of CO₂ into the atmosphere. Raising CAFE therefore dramatically reduces CO₂ emissions.

CAFE standards have additional benefits. CAFE standards help in the effort to clean the air. By reducing oil consumption, the standards keep 500,000 tons per year of carcinogenic hydrocarbon emissions, a key smog-forming pollutant, from upstream sources -- refining and transporting of oil and refueling at the pump -- and out of the air we breathe. The standards, therefore, improve air quality, helping polluted cities and states achieve Clean Air Act requirements. Because fuel economy for cars doubled between 1975 and the late 1980s, a new car purchaser saves an average of \$3,000 at the gas pump over the lifetime of the car. With today's high fuel prices, CAFE delivers more than \$40 billion annually in consumer savings. Consumers can spend these dollars in their communities on food, housing, and clothing, instead of on imported oil.

Curbing Global Warming: Raising Fuel Economy Standards:

Transportation is the fastest growing sector of US greenhouse gas emissions. Raising CAFE standards for passenger vehicles, which account for 20% of US emissions, is an essential part of a domestic strategy to reduce greenhouse gas pollution. In its August 2000 report entitled "Automobile Fuel Economy: Potential Effects of Increasing the Corporate Average Fuel Economy Standards," the General Accounting Office concluded that raising CAFE standards can reduce oil consumption and thereby reduce global warming pollution.

A critical starting point is closing the loophole that allows light trucks to meet a lower fuel economy standard than cars. The CAFE standard for cars is 27.5 mpg, while for light trucks the standard is only 20.7 mpg. Moreover, while the fuel economy standard for light trucks has stagnated for 19 years, the market share of these vehicles has jumped from 20% in the 1970s to nearly 50% of new vehicle sales in

warming and smog-forming pollution than cars. The company also recognizes that SUVs endanger other motorists.

The Sierra Club has documented the importance of addressing the issue of SUV fuel economy in a new report entitled "Driving up the Heat: SUVs and Global Warming." (Attachment B.)

As of last year, the explosive growth in light truck sales had already brought the average fuel economy of all the nation's new vehicles to its lowest point since 1980, according to EPA's 1999 Fuel Economy Trends Report. Indeed, while a 14-mile per gallon SUV emits more than 130 tons of carbon dioxide over its lifetime, the average new car emits 74 tons. A new Honda Insight will emit only 27 tons.

Closing the light truck loophole alone would slash US CO₂ emissions by 240 million tons per year when fully phased in.

Importantly, raising CAFE standards for light trucks will save oil and reduce US dependence on imports -- a key consideration in the original CAFE law. According to the 1999 EPA Fuel Economy Trends Report: "Based on lower average fuel economies and projected longer useful lives, EPA estimates that the new light-duty trucks sold in 1999 will consume, over their lifetimes, almost 60 percent of the fuel used by all of the new light vehicles sold in 1999."

The technology is available to ensure that tomorrow's SUVs are more efficient, and therefore pollute less. According to the Union of Concerned Scientists, the best-selling Ford Explorer, which gets only 19 mpg, could be a 34-mpg vehicle by putting today's technology to work. The cost of the technology is made back by the consumer in about two years from savings at the gas pump.

Gasoline-electric hybrid technology will allow automakers to achieve improved CAFE standards for all vehicles. Both Honda and Toyota are pressing ahead with hybrid gasoline-electric technology. Honda's Insight gets more than 60 mpg, and Toyota's 5-passenger Prius travels 50 miles to the gallon. Ford has announced that it will put hybrid technology into its Escape SUV to achieve 40 mpg. And, Toyota unveiled a 42-mpg hybrid minivan at the 2000 Tokyo auto show.

It is critical that hybrid or other technologies, such as fuel cells, are not used only to reduce oil consumption and pollution spewing from individual vehicles, or simply to assist manufacturers in complying with the existing low standards, but rather are used to ensure that real improvements are made to the entire fleet. Because their vehicles remain so inefficient, Ford, General Motors and DaimlerChrysler are all having problems meeting the low 20.7-mpg CAFE standard for light trucks. Because CAFE is an average standard, hybrid technology could become one more tool which automakers use to enable them to comply with the existing standard. Ford's Escape, for example, could be used to offset the low mileage of the other vehicles in the automaker fleet, and not result in overall improvement.

While both Ford and General Motors have made important pledges to raise the fuel economy of their light trucks, progress by all automakers in all passenger vehicles must be assured. Raising the CAFE standard for both cars and light trucks will ensure that the fuel economy improvements reflect what is technologically feasible and result in the maximum reductions in CO₂. This step will show the rest of the world that the US is taking real actions to reduce the threat of global warming.

Raising CAFE standards will also further reduce hydrocarbon emissions, save consumers money at the pump and create jobs. An analysis by the American Council for an Energy Efficient Economy concludes that the consumer savings at the pump would translate into a net increase of 244,000 jobs nationwide, with 47,000 of these in the auto industry.

CAFE and Safety:

CAFE standards have no impact on auto safety. The rate of traffic fatalities decreased by 50 percent over the same time that fuel economy doubled under the existing standards. The auto industry has consistently opposed the CAFE law using the safety argument. In 1974, a Ford representative argued before Congress that CAFE would result in a “product line consisting of either all sub-Pinto-sized vehicles or some mix of vehicles ranging from a sub-sub-compact to perhaps a Maverick.” Of course, this dire prediction proved to be untrue, just as today’s parade of horrors will be.

The auto industry met CAFE requirements while providing consumers with a full range of cars and light trucks. In fact, when Congress passed the CAFE law, America had the industrialized world’s least efficient fleet of vehicles. The CAFE law spurred development of technology and improved the competitiveness of our auto industry. Eighty-five percent of efficiency improvements came from technologies such as more efficient engines and transmissions, and better aerodynamics.

Research by both the Center for Auto Safety on cars, and by the Union of Concerned Scientists on SUVs, demonstrates that higher fuel economy standards can be achieved using existing technologies, while also reducing occupant deaths and injuries without altering the vehicle mix. Cost-effective technologies such as improved engines and transmissions and new materials are the keys to achieving higher fuel economy in both cars and light trucks. These technologies will also help the American automotive industry face an increasingly competitive future.

Raising light truck CAFE standards, in fact, would help restore balance and compatibility to the overall vehicle fleet, resulting in reductions in traffic fatalities and pollution. Light trucks pose safety dangers to their owners and occupants. SUVs are four times more likely to roll over in an accident. Rollovers account for 62% of SUV deaths, but only 22% in cars. Yet automakers continue to fight new standards protecting occupants in rollover accidents. According to a study by the National Crash Analysis Center, an organization funded by both the government and the auto industry, occupants of an SUV are just as likely as occupants of a car to die once the vehicle is involved in an accident. One explanation is that SUVs have high rollover rates.

Light trucks, particularly heavy SUVs and pickups, are fundamentally incompatible with cars on the road. According to the National Highway Traffic Safety Administration, collisions between cars and light trucks account for more than half of all fatalities in crashes between light duty vehicles. Nearly 60% of all fatalities in light vehicle side impacts occur when the striking vehicle is a light truck. SUVs are nearly three times as likely to kill drivers of other vehicles during collisions than are cars. Finally, these vehicles pose excessive risks to pedestrians because of their design, weight and weaker brakes. The same technologies that will help to improve light truck fuel economy can help to improve their safety.

Public Support for Raising CAFE Standards:

Polls consistently show that the American people support raising fuel economy standards. An August 1999 World Wildlife Fund poll of light truck owners showed that 73% believed light trucks should be cleaner, and two-thirds would pay significantly more for their next truck if it polluted less. Significantly, 70% believed automakers would not clean up their trucks if they are not required to do so. Another August 1999 poll, by Zogby International, of predominately Independent and Republican voters in New Hampshire revealed that 75% favor increasing fuel economy to address global warming, even at an extra cost of \$300. In 1998, a Research/Strategy/Management, Inc. poll conducted for the Sustainable Energy Coalition showed that 97% of Americans favored use of new technologies that would improve fuel economy. And the 1998 Scripps Howard Texas Poll revealed that Americans are very supportive of measures that will reduce our dependence on oil. Sixty-four percent of Texans agreed with the following statement: "We should reduce our dependence on coal and oil energy sources in order to decrease the impacts of global warming even if that means we will pay more for cleaner, renewable energy sources."

The results of these polls are consistent with polls dating back to the early 1990s. A 1991 poll conducted for the Union of Concerned Scientists demonstrated overwhelming public support, exceeding 80%, for requiring 40 to 45 miles per gallon fuel economy standards.

The CAFE Freeze Rider:

CAFE standards for both cars and light trucks have not changed in years because of a rider to the Transportation Appropriations bill that bars the Department of Transportation (DOT) from implementing the law. The rider has been in place since 1996. The fuel economy freeze rider has precluded the Department from using funds to "prepare, propose, or promulgate" CAFE standards. In effect, this blocks the department from considering technical feasibility of improving the standards, the economic practicality of doing so, the effect of other Federal motor vehicle standards on fuel economy, and the need of the nation to conserve oil.

The rider blocking the DOT from doing its work has frozen fuel economy standards for both cars and light trucks. Light truck fuel economy has been most affected because the freeze provision killed a light truck fuel economy rulemaking; it has allowed the large disparity between car and light truck fuel economy to persist. The CAFE rider has, in essence, substituted Congress's judgment on the "technical feasibility" of raising light truck standards as well as the effect of other federal motor vehicle safety

standards on fuel economy for that of the experts it charged with undertaking this analysis. And, by stealth, the rider even denies the American people the benefit of DOT's analysis that it would do in preparation for proposing new standards.

In 1999, 42 Senators supported the "Clean Car Resolution" opposing the House-based anti-CAFE rider. And in 2000, members of the Senate reached an agreement for FY 2001 which calls for the National Academy of Sciences, in conjunction with the DOT, to study CAFE standards. The Academy will consider the four factors in the original law as well as several other issues including safety. This victory over a complete freeze on even a study of CAFE still leaves the DOT unable to act on CAFE in the face of today's high oil prices.

CLEAN ENERGY AND ENERGY EFFICIENCY

The United States has entered the 21st century relying on dirty, polluting 19th century fossil fuel technology. In contrast, our economic competitors, Japan and Europe, use only half the energy we do to achieve roughly the same standard of living.

We need to clean up our electric power plants. Many electric utilities still use coal to produce electricity, spewing millions of tons of carbon dioxide and other pollution into the atmosphere every year. Converting these plants to burn cleaner natural gas could solve part of the problem. We could do much more to save energy in our homes and office buildings. More energy efficient lighting, appliances, heating and air-conditioning could keep millions of tons of carbon dioxide out of the air each year.

Harnessing the clean, abundant energy of the sun and wind is critical to solving the global warming problem. Technological advances have brought the cost of electricity generated by the wind down by 85% since 1981. Wind "farms" are now producing energy from coast to coast. Solar energy technology has made remarkable progress as new photovoltaic cells have been developed to convert ever greater amounts of sunlight directly into electricity. Today the costs of wind and solar power are approaching that of cheap, dirty coal plants.

Midwestern states in particular hold enormous potential as sources of renewable energy. Renewable sources currently make up less than 1% of the energy market in the US. However, states like Kansas, Nebraska, North Dakota, and South Dakota hold the potential to become the Saudi Arabia of wind power. We need to invest more in research, development and demonstration to put these clean domestic technologies over the top and enact standards that require an increasing percentage of our energy to come from these clean, renewable sources.

CONCLUSION: Taking Action

Raising CAFE standards is a sensible and essential solution to the global warming pollution problem. New standards will ensure that new cars and light trucks utilize modern technology to achieve real oil savings and pollution reductions. If we are to curb global warming, we must also put better technology

into power plants, offices, and homes, as well as invest in the next generation of energy saving technologies.

There are high costs to inaction. If we fail to act to curb global warming we will impose on our children enormous impacts on health, coasts, agriculture, and infrastructure. These impacts carry a price tag in the hundreds of billions of dollars. And, what is the dollar value on lives lost to heat waves, infectious disease, and extreme weather?

Experts have joined in emphasizing how global warming will affect us all. And they have emphasized that the steps to curb global warming pollution can be cost-effective.

The time to act to curb global warming is now. The IPCC scientists tell us that our children and grandchildren are facing a very serious threat. They warn us that global warming threatens our health with disease and heat waves, our coasts with rising seas, our agriculture with drought and extreme weather, and our river communities with flooding. We can and must take action to protect our children's future.